

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
15 November 2001 (15.11.2001)

PCT

(10) International Publication Number  
**WO 01/86535 A1**

(51) International Patent Classification<sup>7</sup>: **G06F 17/60**

(21) International Application Number: PCT/NZ01/00082

(22) International Filing Date: 9 May 2001 (09.05.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
504442 9 May 2000 (09.05.2000) NZ

(71) Applicant (for all designated States except US): **CAD-MUS TECHNOLOGY LIMITED** [NZ/NZ]; 22 Centre Street, Freemans Bay, Auckland (NZ).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BAILEY, Ian, Charles** [NZ/NZ]; 19 Hemi Street, Devonport, Auckland (NZ).

(74) Agents: **HAWKINS, Michael, Howard** et al.; Baldwin Shelston Waters, P.O. Box 852, Wellington (NZ).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

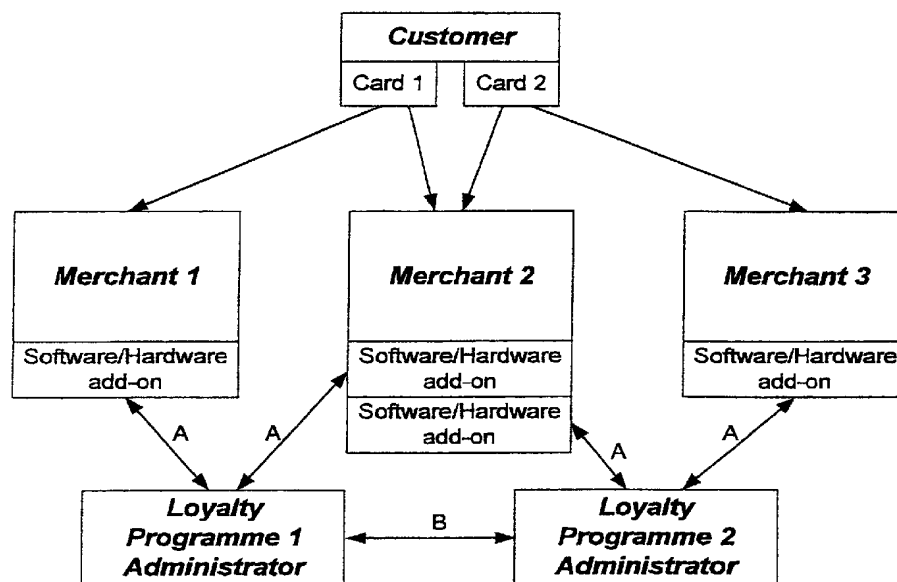
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR PROVIDING AN INTEGRATED LOYALTY SYSTEM



(57) Abstract: A method and apparatus for providing an integrated loyalty system is provided. The apparatus communicates with a transaction network to identify transactions that relate to a member of one of a plurality of loyalty programmes. A value that is redeemable to the benefit of the member is calculated according to a set of parameters stored by the apparatus that correspond to the loyalty programme that the member belongs or a selected loyalty programme should the member belong to more than one loyalty programme.



WO 01/86535 A1

**METHOD AND APPARATUS FOR  
PROVIDING AN INTEGRATED LOYALTY SYSTEM**

**Technical Field**

5

This invention relates to a method and apparatus for providing a plurality of loyalty programmes.

**Background**

10

As industry has increasingly looked for alternatives to price competition, loyalty programmes have become a popular method of enticing customers to purchase their services or products or reward customers for their custom. The loyalty programmes offer an opportunity to accumulate value by making purchases, which may be exchanged for products, services or funds. The value accumulated typically depends on the number of transactions and/or value of the transactions with merchants who are members of the loyalty programme.

20

Many loyalty programmes identify their customer members using a card system. This provides a convenient way to identify the customer so that value can be accredited to them. However, as loyalty programmes have become increasingly popular, customers are being asked to carry an increasing number of cards to identify themselves as a member of each loyalty programme to which they belong.

25

Further, existing methods of implement loyalty programmes require separate systems for each loyalty programme to enable the issue of a card to each member and allocate an identification means to that card, such as an identification number. Separate devices, software or a combination thereof must also be supplied on either a separate terminal and/or modifications made to existing terminal

30

devices at the merchant's site. The provision of these additional services typically results in a high capital and/or administration cost involved in becoming a merchant member of a loyalty programme. Therefore, this cost must be absorbed, typically by the merchants wishing to become members of the loyalty programme. This cost may then diminish the benefit of belonging to the loyalty programme and the benefit that can be transferred to the users of the loyalty programme. Furthermore, if a single merchant is to become a member of a number of loyalty programmes, the cost may accumulate to unacceptable levels.

Thus, it is an object of the present invention to overcome or at least alleviate problems in methods and apparatus for providing loyalty programmes at present, or at least to provide the public with a useful choice.

### **Summary Of The Invention**

According to one aspect of the present invention, there is provided apparatus for providing an integrated loyalty system, the apparatus including:

- ♦ communication means adapted to receive transaction information from a transaction network;
- ♦ information storage means storing a set of parameters for each of a plurality of loyalty programmes and membership information identifying members of the loyalty programmes and the loyalty programme or programmes that each member is affiliated with;
- ♦ processing means adapted or programmed to identify a transaction from said transaction information, determine a member that said transaction is associated with, compute a value dependent at least on the set of parameters of a selected loyalty programme and credit said value to an account of said member;

wherein said value or a derivative therefrom is redeemable to provide benefit to said member.

Preferably, the selected loyalty programme may be determined  
5 from the membership information.

Preferably, the processing means may be adapted to identify transactions within the transaction information in which the parties to the transaction are affiliated with said one or more loyalty  
10 programmes.

Preferably, the storage means may further store priority information identifying a loyalty programme priority, wherein if the transaction is applicable to a plurality of loyalty programmes, the  
15 selected loyalty programme is determined from the priority information.

Preferably, said transaction network may be a funds transaction network that facilitates electronic transfer of funds.

Preferably, the apparatus may include a second communication means adapted to allow communication with an administrator of each  
20 loyalty programme.

Preferably, the integrated loyalty system may be adapted to  
25 allow access to information regarding the account of members of an integrated loyalty system by a loyalty programme administrator through said second communication means, wherein the processing means controls access to information so that only information regarding accounts associated with the loyalty programme of said  
30 loyalty programme administrator may be accessed by the administrator.

According to another aspect of the present invention, there is provided a method of providing an integrated loyalty system, the method including:

- 5           ♦ receiving transaction information from a transaction network;
- ♦ identifying a transaction within said transaction information and identifying a loyalty programme from a plurality of loyalty programmes to which said transaction relates;
- 10          ♦ retrieving information defining a set of parameters for the identified loyalty programme;
- ♦ computing a value dependent on at least said set of parameters; and
- 15          ♦ crediting the value to an account of a member of the integrated loyalty system to which the transaction information relates, wherein said value or a derivative therefrom is redeemable to provide benefit to said member.

Preferably, the method may further include identifying a loyalty programme according to a stored loyalty programme priority ranking  
20 when transaction information may relate to a plurality of loyalty programmes.

Preferably, the method may further include selectively capturing transaction information from the transaction network, the selected  
25 transaction information relating to transactions between members of the integrated loyalty system.

Preferably, the method may further include communicating information relating to the account of members of a loyalty programme  
30 to the administrator of that loyalty programme.

Further aspects of the present invention may become apparent from the following description, given by way of example only, and in which reference is made to the accompanying drawings.

5     **Brief Description Of The Drawings**

Figure 1:     shows a block diagram representation of an existing system for providing a loyalty programme.

10

Figure 2:     shows a block diagram representation of the communication between parties of loyalty programmes according to one aspect of the present invention.

15

Figure 3:     shows a block diagram representation of an implementation of one embodiment of the present invention.

20     **Detailed Description Of The Drawings**

Referring first to Figure 1, a trading network incorporating known loyalty programmes and associated apparatus is shown in generalised block diagram form. A customer who belongs to two  
25   loyalty programmes, loyalty programme 1 and loyalty programme 2 carries two identification cards, card 1 and card 2 to identify themselves as a member of each loyalty programme. The customer purchases goods or services at any one of merchants 1 to 3 who are members of at least one loyalty programme. Merchant 1 is a member  
30   of loyalty programme 1, merchant 3 is a member of loyalty programme 2 and merchant 2 is a member of both loyalty programme 1 and loyalty programme 2. In order to administer the loyalty programmes, a software and/or hardware add-on is provided at each of the merchants who are members of the loyalty programme to allow communication of

transaction data, indicated by arrows A between the merchants and the loyalty programme administrators. As merchant 2 is a member of both loyalty programmes, merchant 2 requires two software and/or hardware add-ons in order to accommodate the systems of each  
5 loyalty programme.

The customer uses card 1 at merchant 1 and card 2 at merchant 3 and either card at merchant 2 depending on which loyalty programme they wished to use.

10

In the example shown in Figure 1, merchant 2 must be provided with both sets of software and/or hardware add-ons to be members of both loyalty programmes. This causes additional expense to implement the system. Furthermore, the additional expense provides a  
15 disincentive for merchants 1 and 3 to join more than one loyalty programme. This limits the flexibility in options that they can offer to the customer and therefore may result in a loss of sales.

Although the example in Figure 1 shows only two loyalty  
20 programmes, it will be appreciated that any number of loyalty programmes may offering membership. In this case, the requirements for additional software and hardware may accumulate to levels where the merchants can not afford to belong to all the loyalty programmes which their customers demand. Furthermore, the customers are  
25 required to carry numerous identification means, typically cards to show that they are members of the loyalty programmes.

Referring now to Figure 2, the information flow within an integrated loyalty system according to one aspect of the present  
30 invention is represented generally in block diagram form. The customer uses a single transaction card for purchases at merchants 1 to 3 regardless of the loyalty programme that the customer and merchant are affiliated with. No further identification is required. This

same card may be used for the general transaction purposes of the customer, for example through an on-line credit card transaction, electronic funds transfer at point of sale (EFTPOS) system or other transaction network.

5

The integrated loyalty system administrator receives transaction information from a transaction network to enable it to extract or capture information relating to customers transactions at each merchant who is a member of the integrated loyalty system. The integrated loyalty system administrator receives from each loyalty programme owner information regarding the requirements of each loyalty programme, in particular, a set of parameters used to calculate the reward or value for using the loyalty programme based on the transaction information available through the transaction network. For example, the parameters may include allocating one point of value for every dollar spent, with extra points allocated depending on the number of transactions or the accumulated value of the transactions.

In an alternative embodiment, the set of parameters may instruct the integrated loyalty system administrator to simply forward the transaction to the relevant loyalty programme owner. Thus, the integrated loyalty system performs a unity transformation on the transaction. The loyalty programme owner then may calculate the required value, which the customer (or merchant if loyalty reward is given to the merchant) can redeem for their benefit.

Identification means other than a card may be used by the customer, including a pin number entered into a terminal at the merchants premises, biometric information such as a thumb-print or any other suitable identification means. In the preferred embodiment, the identification mean is the same as that used to facilitate funds transfer using a funds transaction network, but may alternatively be part of a separate transaction network, which may be dedicated to the



communication of transaction information related to the integrated loyalty system.

5       The customer may have more than one card, for example more than one credit card that they may wish to use from time to time at various merchants. A feature of the present invention is that the customer can use their normal transaction cards and receive the benefits of one or more loyalty programmes. The requirement is that use of the card is recognised by the loyalty system administrator so  
10       that they can extract the relevant transactions from the transaction information created by use of the card. Alternatively, a single generic loyalty card may be used for a number of loyalty programmes.

15       The integrated loyalty system administrator may have one or more of it's own loyalty programmes and may optionally not be associated with any other loyalty programme administrator.

20       In use, each customer who is a member of the integrated loyalty system provides a list of the loyalty programmes which they are currently members of to the integrated loyalty system administrator. The required information to identify transactions made by a customer is then captured from the transaction network and a value assigned to the transaction and stored in an account of the customer awaiting redemption. The value may then be used to  
25       purchase goods or services, provide a discount against other accounts and/or to redeem for cash or any other item or service of value. The loyalty system may also or alternatively be used to credit a merchant who is affiliated with the loyalty programme.

30       Alternatively, the integrated loyalty system may offer a selection of loyalty programmes which the customer may wish to become a member of or store the transaction information so that the customer can decide at a later date which loyalty programme the

transaction is to be accredited to if there is a choice. It will be appreciated by those skilled in the art that the integrated nature of the loyalty system to administer a plurality of loyalty programmes provides additional flexibility. For example, value may be transferred easily  
5 between loyalty programmes, or customers may be able to get the benefit of more than one loyalty programme from a single transaction.

If a merchant only belongs to a single loyalty programme, then the value of any transactions by customers who are also members of  
10 the same loyalty programme are captured by the integrated loyalty system and converted into a corresponding value for that loyalty programme.

If a single merchant belongs to multiple loyalty programmes and  
15 the customer belongs to at least two of those programmes, a method of selecting a loyalty programme is required. This may simply be a list of the loyalty programmes in order of importance stored within the integrated loyalty system. In this case, if a customer uses their transaction card at a merchant belonging to more than one loyalty  
20 programme to which the customer also belongs, then the loyalty programme having a higher priority may dominate. Alternatively, some type of selection means may be provided at each merchant to indicate to the integrated loyalty system which loyalty programme the customer wishes to use. This may require additional software and/or  
25 hardware, although the cost of this relatively simple add-on would be small in comparison to the requirements of existing systems. Of course, if the customer is allowed to accumulate the value on more than one loyalty programme from a single transaction, then this problem does not arise.

30

Figure 3 shows a block diagram representation of an example implementation of the present invention. Customer 1 and customer 2 conduct a transaction at merchants 1 and 2 and merchant 3

respectively. Merchants 1, 2 and 3 are part of a transaction network, referenced by box T. Transaction information is communicated to either bank 1, which customer 1 has an account with, or bank 2, which customer 2 has an account with through a suitable communication network. The integrated loyalty system administrator monitors transaction information communicated within the transaction network, for transactions conducted by members of the integrated loyalty system. Permission is likely to be required from the communication network administrator, the banks, the merchants and the customers to monitor the transaction information in order not to violate privacy or confidentiality laws. Also, appropriate security measures are also a likely requirement, which may vary depending on the legal jurisdiction that the system is implemented in.

The integrated loyalty system administrator monitors the transaction information for the information that identifies the customer and or the merchant. For example, the integrated loyalty system administrator may monitor the transaction information for transactions that credit the accounts of merchants that are a member of one or more of the loyalty systems. The transaction information may then be analysed to determine whether the funds are from a customer who is also a member of a loyalty programme that the merchant is a member of.

The integrated loyalty system administrator receives transaction information from the transaction network through an interface at one or more suitable locations in the network. Depending on the transaction network, the interface may monitor network traffic from a node in the network separate from the banks and merchants, may monitor information communicated to a bank or information communicated from each merchant.

Depending on the nature of the communication and routing protocols of the transaction network, it may not be possible for the integrated loyalty system administrator to monitor the transaction information through an interface to the communications network. This  
5 is due to the information being addressed not to the administrator, but to the banks.

The preferred form of the integrated loyalty system allows each merchant to be affiliated to one or more loyalty programmes without  
10 the requirement for any software and/or hardware add-ons beyond any existing transaction network. Each customer needs only to carry a single transaction card, assuming that all merchants accept that card. Therefore, the integrated loyalty system administrator may interface with the banks systems, or sit between the bank and the  
15 communication network. Alternatively, the communications network administrator may have the ability to monitor the relevant transaction information and allow access to the required information.

While it is preferable to reduce cost to interface with the banks  
20 or communication network administrator's systems, regulatory and commercial restrictions may prevent this. In this case, the integrated loyalty system may interface with each merchant, by additional hardware or software provided with the transaction terminal used to facilitate payment for goods or services. While this creates additional  
25 expense, it is still advantageous over systems requiring multiple additions of software and or hardware if a merchant is to belong to multiple loyalty programmes.

Once transactions performed by members of the integrated  
30 loyalty system have been identified, then value can be added to an account of the member who performed the transaction as described herein above. This value is redeemed by the member for their benefit.

Thus, there is provided an integrated loyalty system wherein the customer is required to only carry a single card for multiple loyalty programmes and one which takes advantage of existing transaction networks, rather than requiring hardware and/or software add-ons.

5

Where in the foregoing description, reference has been made to specific components or integers of the invention having known equivalents then such equivalents are herein incorporated as if individually set forth.

10

Although this invention has been described by way of example and with reference to possible embodiments thereof, it is to be understood that modifications or improvements may be made thereto without departing from the scope of the invention as set forth in the accompanying claims.

15

**CLAIMS:**

1. Apparatus for providing an integrated loyalty system, the apparatus including:
  - 5 • communication means adapted to receive transaction information from a transaction network;
  - information storage means storing a set of parameters for each of a plurality of loyalty programmes and membership information identifying members of the loyalty programmes and the loyalty programme or programmes that each  
10 member is affiliated with;
  - processing means adapted or programmed to identify a transaction from said transaction information, determine a member that said transaction is associated with, compute a  
15 value dependent at least on the set of parameters of a selected loyalty programme and credit said value to an account of said member;wherein said value or a derivative thereof is redeemable to provide benefit to said member.  
20
2. Apparatus for providing an integrated loyalty system as claimed in claim 1, wherein the selected loyalty programme is determined from the membership information.
- 25 3. Apparatus for providing an integrated loyalty system as claimed in either claim 1 or claim 2, wherein the processing means is adapted to identify transactions within the transaction information in which the parties to the transaction are affiliated with said one or more loyalty programmes.
- 30 4. Apparatus for providing an integrated loyalty system as claimed in any one of claims 1 to 3, wherein the storage means further stores priority information identifying a loyalty programme

priority, wherein if the transaction is applicable to a plurality of loyalty programmes, the selected loyalty programme is determined from the priority information.

- 5     5.     Apparatus for providing an integrated loyalty system as claimed in any one of the preceding claims, wherein said transaction network is a funds transaction network that facilitates electronic transfer of funds.
- 10    6.     Apparatus for providing an integrated loyalty system as claimed in any one of the preceding claims, wherein the apparatus includes a second communication means adapted to allow communication with an administrator of each loyalty programme.
- 15    7.     Apparatus for providing an integrated loyalty system as claimed in any one of the preceding claims, wherein the integrated loyalty system is adapted to allow access to information regarding the account of members of an integrated loyalty system by a loyalty programme administrator through said second communication
- 20     means, wherein the processing means controls access to information so that only information regarding accounts associated with the loyalty programme of said loyalty programme administrator may be accessed by the administrator.
- 25    8.     A method of providing an integrated loyalty system, the method including:
- receiving transaction information from a transaction network;
  - identifying a transaction within said transaction information and identifying a loyalty programme from a plurality of
  - 30     loyalty programmes to which said transaction relates;
  - retrieving information defining a set of parameters for the identified loyalty programme;

- computing a value dependent on at least said set of parameters; and
  - crediting the value to an account of a member of the integrated loyalty system to which the transaction information relates, wherein said value or a derivative therefrom is redeemable to provide benefit to said member.
- 5
9. A method of providing an integrated loyalty system as claimed in claim 8, the method further includes identifying a loyalty programme according to a stored loyalty programme priority ranking when transaction information may relate to a plurality of loyalty programmes.
- 10
10. A method of providing an integrated loyalty system as claimed in either claim 8 or claim 9, wherein the method further includes selectively capturing transaction information from the transaction network, the selected transaction information relating to transactions between members of the integrated loyalty system.
- 15
11. A method of providing an integrated loyalty system as claimed in any one of claims 8 to 10, wherein the method further includes communicating information relating to the account of members of a loyalty programme to the administrator of that loyalty programme.
- 20
12. Apparatus for providing an integrated loyalty system substantially as herein described with reference to Figure 2 and Figure 3 of the accompanying drawings.
- 25
13. A method of providing an integrated loyalty system substantially as herein described with reference to Figure 2 and Figure 3 of the accompanying drawings.
- 30



1/2

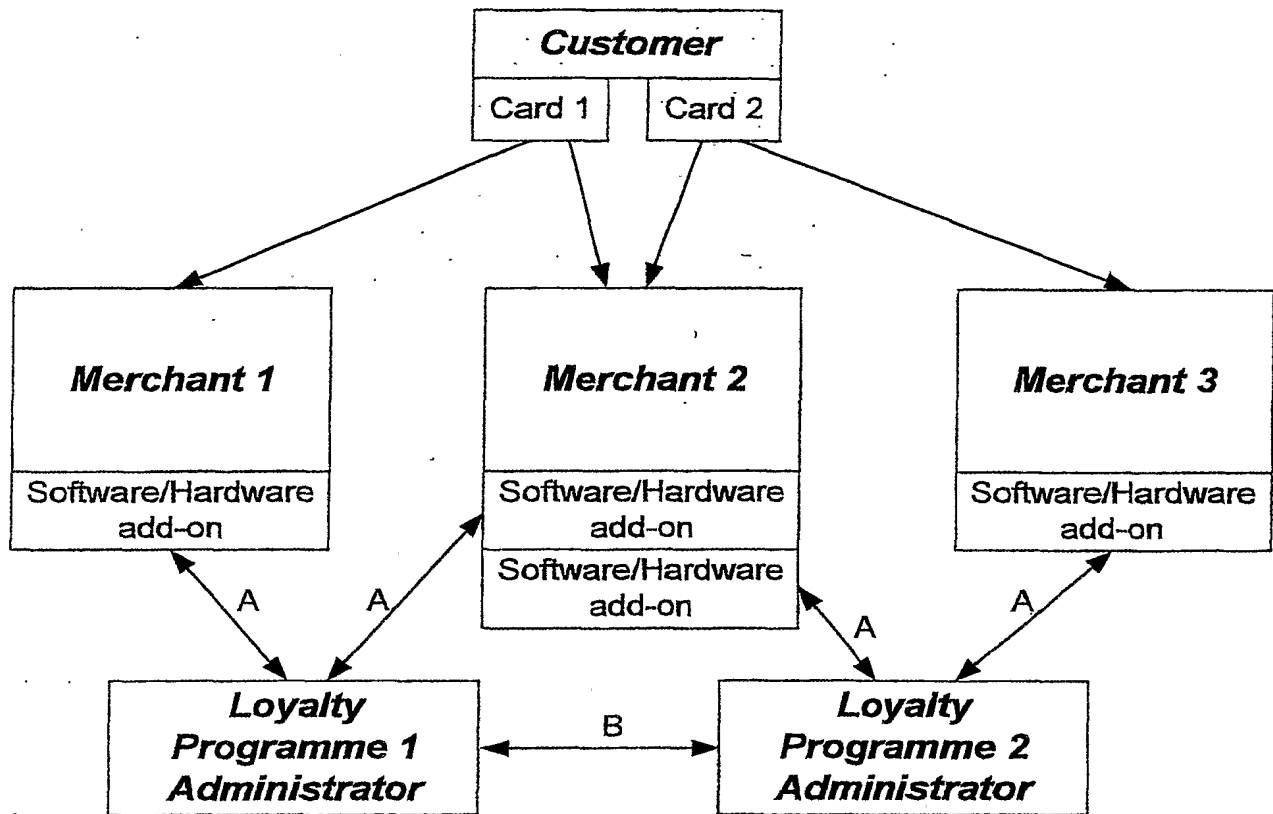


Fig.1. - Prior Art

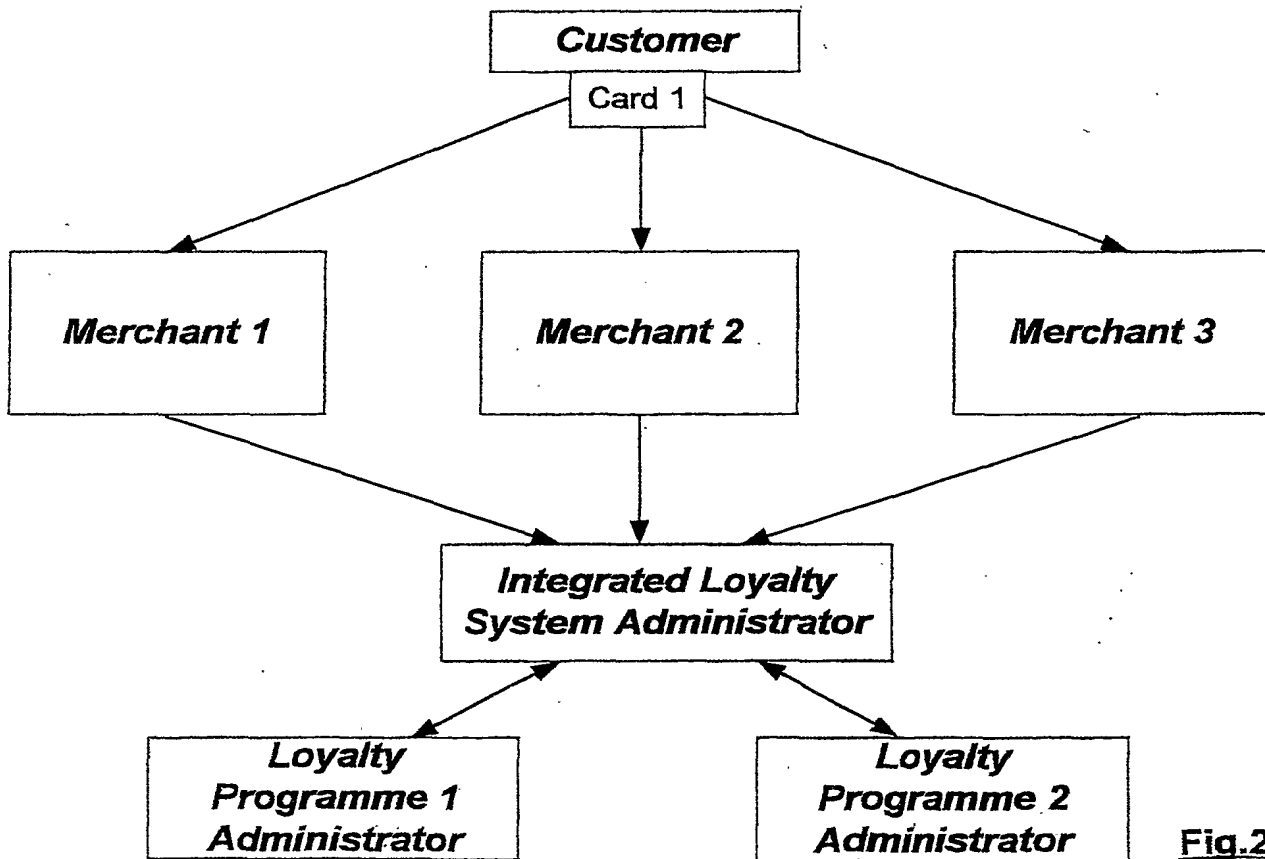
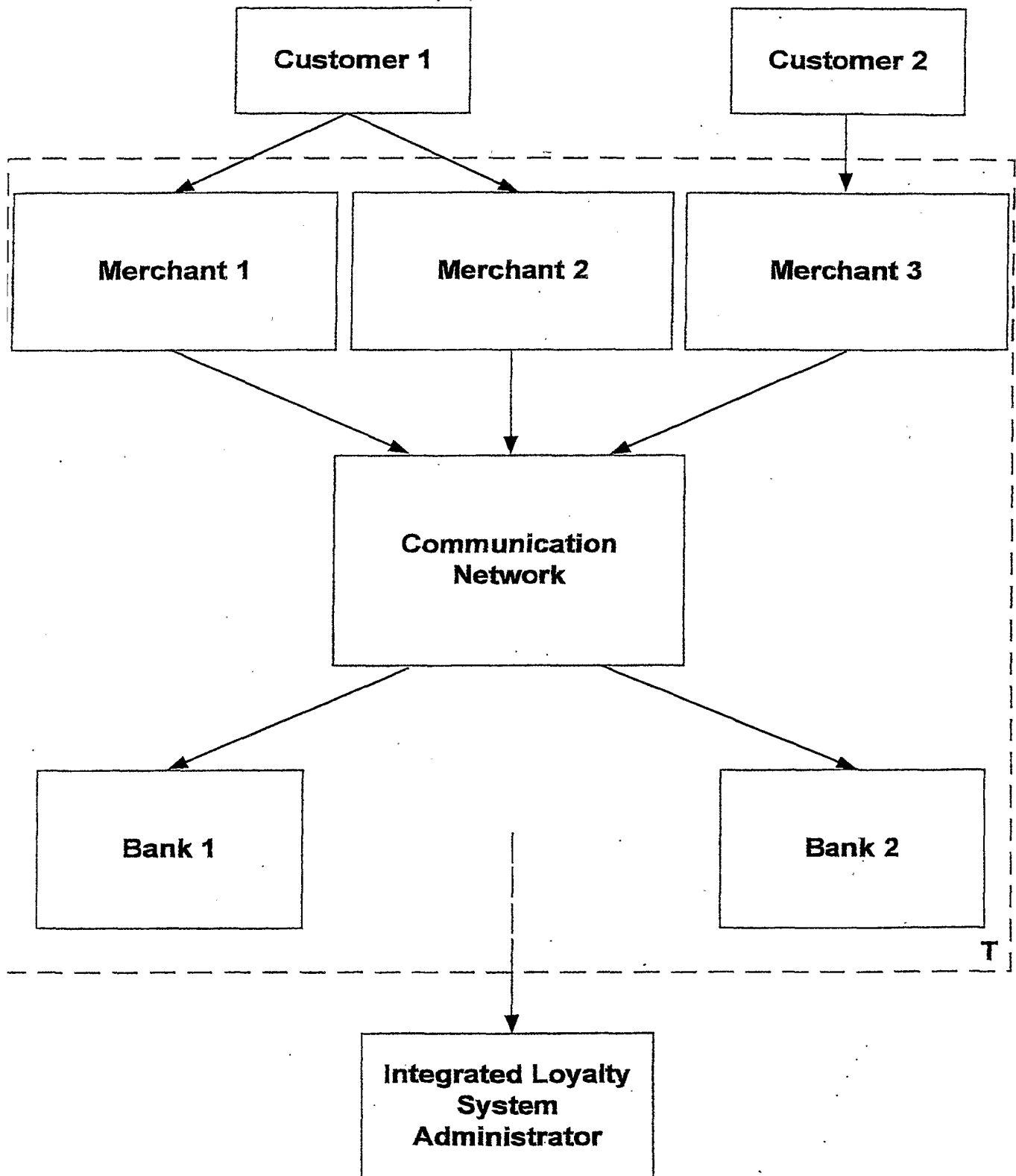


Fig.2.

2/2

**Fig.3.**

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ01/00082

**A. CLASSIFICATION OF SUBJECT MATTER**Int. Cl. <sup>7</sup>: G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G06F --/--

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPAT: loyalty, incentive, scheme, frequent flyer, integrated

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 01/01279 A2 (Anderson et al.) 4 January 2001 See whole document	1-13

☐ Further documents are listed in the continuation of Box C
 ☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

2 August 2001

Date of mailing of the international search report

8 August 2001

Name and mailing address of the ISA/AU

 AUSTRALIAN PATENT OFFICE  
 PO BOX 200, WODEN ACT 2606, AUSTRALIA  
 E-mail address: pct@ipaustralia.gov.au  
 Facsimile No. (02) 6285 3929

Authorized officer

MICHAEL C. LANDER

Telephone No : (02) 6283 2494

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/NZ01/00082**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	01/01279	AU	56424/00	AU	56425/00
		AU	58993/00	AU	57768/00
		WO	01/01282	WO	01/01312
				AU	57782/00
				WO	01/01278
				WO	01/01281
END OF ANNEX					